

Claims

We claim:

1. A video query processing method, comprising:
 - providing video query processing software;
 - providing video content;
 - dynamically linking the software to the video content;
 - receiving by the software a query keyed to a segment of the video content; and
 - determining by the software an answer to the query.
2. The method of claim 1, wherein the software is within a video processing system.
3. The method of claim 2, wherein the video processing system is operating in a stand-alone mode.
4. The method of claim 2, wherein the video processing system is operating in a service mode.
5. The method of claim 1, wherein providing video content includes providing video content in real time.
6. The method of claim 1, wherein providing video content includes providing recorded video

2 content.

1 7. The method of claim 1, wherein the determining comprises receiving information by the
2 software, wherein the information is derived from a database, and wherein the information
3 answers the query.

1 8. The method of claim 7, wherein receiving information includes:
2 receiving data from the database, wherein the data includes the information; and
3 extracting the information from the data.

1 9. The method of claim 7, wherein receiving information includes:
2 finding data in the database, wherein the data includes the information; and
3 extracting the information from the data at the database;
4 sending the information to the software.

1 10. The method of claim 7, further comprising identifying the database by a pointer located in a
2 search site descriptions repository.

1 11. The method of claim 7, wherein the software is within a video processing system, and
2 wherein the database is external to the video processing system.

1 12. The method of claim 11, wherein the database is coupled to an Internet web site.

1 13. The method of claim 11, wherein the database is coupled to a remote server.

1 14. The method of claim 1, wherein providing video content includes providing the dynamic
2 video content to a user of the video query processing method, and wherein receiving the query
3 includes communicating the query to the software by the user.

1 15. The method of claim 14, further comprising communicating the answer to the user.

1 16. The method of claim 1, wherein the determining comprises:
2 receiving by the software information derived from each database of a plurality of
3 databases, wherein each database is external to the video processing system, and wherein the
4 information derived from each database partially answers the query; and
5 merging the information derived from each database to arrive at the answer.

1 17. The method of claim 16, wherein receiving information includes:
2 receiving data from each database, wherein the data received from each database includes
3 the information derived from each database; and
4 extracting the information derived from each database from the data of each database.

1 18. The method of claim 16, wherein receiving information includes:
2 finding data in each database, wherein the data in each database includes the information
3 derived from each database;

4 extracting the information derived from each database from the data in each database,
5 wherein the extracting is executed at each database; and
6 sending the information derived from each database to the software.

1 19. The method of claim 1, wherein the query received by the software is a canned query.

1 20. The method of claim 19, wherein the canned query is a function of a genre of the video
2 content.

1 21. The method of claim 1, wherein the query received by the software is an unbounded query,
2 and further comprising deriving at least one canned query from the unbounded query.

1 22. The method of claim 1, wherein the query received by the software is in indefinite form, and
2 further comprising recasting the received query in definite form.

1 23. The method of claim 1, further comprising:

2 receiving by the software a program-level question in relation to the video content; and
3 ascertaining by the software an answer to the question.

4 24. The method of claim 23, further comprising extracting features from the video content,
5 wherein the ascertaining includes utilizing the extracted features to answer to the question.

1 28. A video query processing system, comprising video query processing software dynamically
2 linked to video content and configured to receive a query keyed to a segment of the video content
3 and configured to determine an answer to the query.

1 29. The system of claim 28, wherein the software is within a video processing system.

1 30. The system of claim 29, wherein the video processing system is operating in a stand-alone
2 mode.

1 31. The system of claim 29, wherein the video processing system is operating in a service mode.

1 32. The system of claim 28, wherein the video content includes real-time video content.

1 33. The system of claim 28, wherein the video content includes recorded video content.

1 34. The system of claim 28, further comprising a database, wherein the software is configured to
2 determine the answer by receiving information that is derived from the database, and wherein the
3 information answers the query.

1 35. The system of claim 34, wherein the software is configured to receive data from the database,
2 wherein the data includes the information, and wherein the software is configured to extract the
3 information from the data.

1 36. The system of claim 34, wherein data in the database includes the information, wherein the
2 information is extracted at the database from the data, and wherein the information so extracted
3 is sent to the software.

1 37. The system of claim 34, further comprising a search site descriptions repository that is
2 coupled to the software, wherein the search site descriptions repository includes a pointer that
3 identifies the database.

1 38. The system of claim 34, wherein the software is within a video processing system, and
2 wherein the database is external to the video processing system.

1 39. The system of claim 38, wherein the database is coupled to an Internet web site.

1 40. The system of claim 38, wherein the database is coupled to a remote server.

1 41. The system of claim 28, wherein the software is configured to receive the query from a user
2 of the video query processing system.

1 42. The system of claim 41, wherein the software is configured to communicate the answer to the
2 user.

1 43. The system of claim 28, further comprising a plurality of databases, wherein the software is

2 configured to receive information derived from each database of the plurality of databases,
3 wherein each database is external to the VPS, wherein the information derived from each
4 database partially answers the query, and wherein the system is configured to merge the
5 information derived from each database to arrive at the answer.

1 44. The system of claim 43, wherein the software is configured to receive data from each
2 database, wherein the data received from each database includes the information derived from
3 each database, and wherein the software is configured to extract the information derived from
4 each database from the data of each database.

1 45. The system of claim 43, wherein the data in each database includes the information derived
2 from each database, wherein the information is extracted at each database from the data in each
3 database, and wherein the information so extracted is sent to the software.

1 46. The system of claim 28, wherein the query is a canned query.

1 47. The system of claim 46, wherein the canned query is a function of a genre of the video
2 content.

1 48. The system of claim 28, wherein the query is an unbounded query, and wherein the software
2 is configured to derive at least one canned query from the unbounded query.

1 49. The system of claim 28, wherein the query is in indefinite form, and wherein the software is
2 configured to recast the query in definite form.

1 50. The system of claim 28, wherein the software is configured to receive a program-level
2 question in relation to the video content and to ascertain an answer to the question.

1 51. The system of claim 50, wherein the software is configured to extract features from the video
2 content, wherein to ascertain an answer to the question includes to utilize the extracted features
3 to answer the question.

1 52. The system of claim 51, wherein the software is configured to store the extracted features in
2 transient memory.

1 53. The system of claim 51, wherein to extract features includes to take into account preferences
2 of a user of the query processing system.

1 54. The system of claim 51, wherein to extract features from the video content includes to extract
2 features from at least one of a video program of the video content and an electronic program
3 guide of the video content.

1 55. A video processing architecture, comprising a video processing system, wherein the video
2 processing system includes:
3 a processor;
4 a memory structure coupled to the processor, wherein the memory structure includes a
5 computer code, wherein the computer code includes video query software configured to be
6 dynamically linked to video content and configured to receive a query keyed to a segment of the
7 video content and configured to determine an answer to the query;
8 a local database coupled to the processor;
9 a video input device coupled to the processor and to the local database;
10 a user input device coupled to the processor; and
11 an output device coupled to the processor.

1 56. The video processing architecture of claim 55, further comprising an external database
2 coupled to the software, wherein the video query software is configured to utilize the external
3 database to determine the answer to the query.

1 57. The video processing architecture of claim 55, further comprising a video source, wherein the
2 video processing architecture is configured to enable the video source to transmit the video
3 content to the video processing system.

1 58. The video processing architecture of claim 55, wherein the software is configured to receive
2 the query from a user of the software.

1 59. A computer program product comprising a computer usable medium having a computer
2 readable computer code embedded therein, wherein the computer code comprises video query
3 processing software dynamically linked to video content and configured to receive a query keyed
4 to a segment of the video content and configured to determine an answer to the query.

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